REMARKS

This Response is filed in reply to the Office Action dated September 2, 2003. Claims 1-30 are in the application. Claims 3-20 and 26-30 have been withdrawn. Claims 1, 2 and 21-25 are rejected. Claims 21-25 have been cancelled, without prejudice. Claims 31-52 have been added. Claims 1, 2 and 31-52 are now pending in the application. The issues of the September 2, 2003 Office Action are presented below with reference to the Office Action.

With regard to the Office Action, paragraphs 1 and 2: The Examiner acknowledged Applicants' provisional election with traversal of claims 1, 2 and 21-25, but did not find the traversal persuasive. The requirement was made final.

With regard to the Office Action, paragraphs 3-5: The Examiner rejected claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Loren, U.S. Patent Ser. No. 5,204,050, and rejected claims 21-25 under 35 U.S.C. 102(b) as being anticipated by Blankenburg, U.S. Patent Ser. No. 5,728,325. Applicants traverse the Examiner's rejections and respectfully request reconsideration in view of the amendments and remarks.

Amendments to the claims are not an acquiescence to any of the rejections. Furthermore, silence with regard to any of the Examiner's rejections is not an acquiescence to such rejections. Specifically, silence with regard to Examiner's rejection of a dependent claim, when such claim depends from an independent claim that Applicants consider allowable for reasons provided herein, is not an acquiescence to such rejection of the dependent claim(s), but rather a recognition by Applicants that such previously lodged rejection is moot based on Applicants' remarks and/or amendments relative to the independent claims (that Applicants consider allowable) from which the dependent claim(s) depends. Applicants reserve the option to further prosecute the same or similar claims in the instant or a subsequent application. Claims 21-25 have been cancelled, without prejudice. Thus, the Examiner's rejections with regard to those claims are considered moot. Upon entry of the Amendment, claims 1, 2 and 31-52 are pending in the present application.

Loren discloses injecting a resin into a mold, injecting gas into the resin at a first location to fill out the mold cavity, and thereafter injecting gas at a second location to create a passage in the resin. The resin is allowed to cool and the gas is vented (col. 2, lines 19-24 and 38-50). The gas injection and venting steps are separated by the intermediate cooling step, wherein injected

gas within the cavity is static. Thus, Loren discloses a molding process where there is no flow of injection gas between the gas inlet, or inlets, and the gas outlet apertures.

On the other hand, Applicants' claims 1 and 2 recite, among other things, *flowing the injection gas between the gas inlet and the gas outlet apertures in use*, and *providing gas flow thorough the cavity between the gas inlet and gas outlet apertures*, respectively. The flow of gas through the cavity serves to achieve greater heat transfer between the hot melt and the circulating gas and so the cooling time is reduced, as described in the specification (page 7, lines 6-12). Loren does not teach or suggest a flow of gas between the inlet and outlet apertures. Nor does Loren teach or suggest that such a flow is possible or technically advantageous. Thus, it is respectfully suggested that claims 1 and 7 are not anticipated by Loren and that claims 1 and 7 are in condition for allowance. New claims 31-35 and 36-40 depend from claims 1 and 7, respectively, and are deemed allowable at least by dependency.

Applicants note that an even greater reduction in cooling time is achieved if cooled gas is used, as recited in independent claims 41 and 47 and in dependent claims 31-34 and 36-39. Loren does not teach or suggest injecting cooled gas in the melt to form a gas cavity. In the rejections of claims 21-25, the Examiner contends that Blankenburg discloses sequentially injecting different gases into the resin and that the initial gas injected may be cold. While Applicants note that the rejections to claims 21-25 are moot, the following comments can be made regarding Blankenburg.

Blankenburg appears to recite a method wherein a "hot" gas is first injected, followed by an injection of "cold" gas, and/or of nitrogen gas. As described in Blankenburg, the "hot" gas can be in the range of 150°F to 600°F. No other range of temperatures is described for the "hot" gas. Blankenburg recites an operating sequence wherein, after having injected the hot gas, the cold gas valve is operated, followed by operation of the nitrogen valve. Blankenburg further recites that the cold/nitrogen gas sequence is exemplary, in that only the cold temperature gas valve may be operated, or only the nitrogen valve may be operated, or that the cold temperature gas valve can be operated after the nitrogen valve (col. 8, line 65 to col. 9, line 5). However, the "hot" gas continues to be injected prior to either the cold gas or the nitrogen gas. In fact, Blankenburg teaches away from first injecting cold gas, in that Blankenburg recites that the initial supply of hot or high temperature gas to the mold prevents any initial chilling or

solidification of the molten plastic when it contacts the gas as compared to prior art gas assist injection molding apparatus and methods wherein low or ambient temperature gas is used (col. 2, line 62 to col. 3, line 2).

Applicants respectfully request reconsideration of the rejections of the claims remaining in the Application and suggest that the claims are in condition for allowance in light of the above. Further, the new claims dependent on claims 1 and 7, the new independent claims 41 and 47, and the new claims dependent thereon are deemed patentable in view of the cited art of record and allowance is respectfully requested. The remarks herein should in no way be construed to be an acquiescence to any of the rejections. The remarks herein are being made solely to expedite the prosecution of the above-identified application. Applicants reserve the option to further prosecute the same or similar claims in the instant or subsequent patent applications.

CONCLUSION

Applicants consider the Response herein to be fully responsive to the referenced Office Action. Based on the above Remarks, it is respectfully submitted that this application is in condition for allowance. Accordingly, allowance is requested. If there are any remaining issues or the Examiner believes that a telephone conversation with Applicants' attorney would be helpful in expediting the prosecution of this application, the Examiner is invited to call the undersigned at 617-832-1175.

Respectfully submitted,

Date: December 1, 2003

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